USER MANUAL

ACCESSORIES
WAADAWS… • WA(ADA)PRZ…

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CONTENTS

1 General information

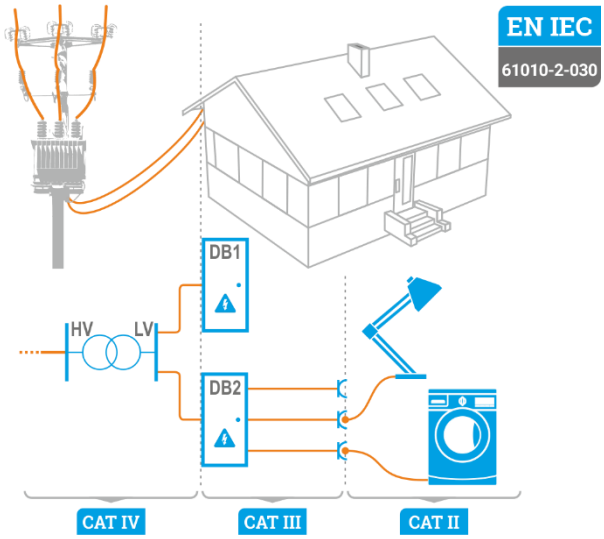
1.1 Safety symbols

The following international symbols are used in the device and/or in this manual:

	Warning. See explanation in the manual		Ground		AC current/voltage
	DC current/voltage		Double insulation (protection class)	CE	Declaration of Conformity with EU directives (*Conformité Européenne*)
	Do not dispose of with other household waste				

Measurement categories according to EN IEC 61010-2-030:

- **CAT II** – concerns measurements performed in circuits directly connected to low voltage installations,
- **CAT III** – concerns measurements performed in buildings installations,
- **CAT IV** – concerns measurements performed at the source of low voltage installation.



1.2 Safety

Follow the instructions below to avoid electric shocks and other injuries.

- Before each use, thoroughly inspect the insulation of the item, checking its wires for any damage (e.g. cracks, cuts, changes in structure or color). In case of discovering any faults, do not use the item and contact the service center.
- It is forbidden to use the product when it is damaged (sparks, chafing, cuts, etc.). Damaged test equipment must be replaced with new ones.
- Test leads must be properly connected to the meter and other accessories.
- Do not use the product above maximum ratings.
- If this product is used in a manner not specified by the manufacturer, the protection may be impaired.

- The cooperation of the product with the measuring instrument is described in the manual of the dedicated meter.
- In a situation where the product cooperates with other devices or accessories, the lowest measuring category of the connected devices is used.
- Clean the product with a soft cloth dampened with water and a mild cleaning agent. It is forbidden to immerse the product in fluids.
- The product can be used with other Sonel products, but only if it is among accessories allowed for a given device.

2 Specifications

2.1 WS-type adapters

2.1.1 WS-01-, WS-03-type adapters

Index	Name	Features
WAADAWS01	WS-01	**START** – button for triggering the measurement **ENTER** – button for saving the result to memory
WAADAWS03	WS-03	**START** – button for triggering the measurement **ENTER** – button for saving the result to memory

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 300 V
b) Type of insulation ..... double
c) Measuring end ..... UNI-Schuko, straight
d) Plug ..... multi-plug
e) Long-lasting load ..... 10 A
f) Maximum voltage ..... 600 V AC / DC
g) The product meets the requirements of ..... EN IEC 61010-031

2.1.2 WS-02-, WS-04-, WS-05-type adapters

Index	Name	Features
WAADAWS02	WS-02	-
WAADAWS04	WS-04	-
WAADAWS05	WS-05	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 300 V
b) Type of insulation ..... double
c) Measuring end ..... UNI-Schuko, angular
d) Plug ..... multi-plug
e) Long-lasting load ..... 10 A
f) Maximum voltage ..... 600 V AC / DC
g) The product meets the requirements of ..... EN IEC 61010-031

2.1.3 WS-07-type adapters

Index	Name	Features
WAADAWS07	WS-07	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 600 V / CAT IV 300 V
b) Type of insulation ..... double
c) Measuring end ..... pin-type
d) Plug
- Plug 1 ..... banana, 4 mm, safe, straight, nickel plated
- Plug 2 ..... multi-plug

e) Long-lasting load ..... 16 A
f) Maximum voltage ..... 600 V AC / DC
g) The product meets the requirements of ..... EN IEC 61010-031

2.1.4 WS-09-type adapters

Index	Name	Features
WAADAWS09	WS-09	**START** – button for triggering the measurement **ENTER** – button for saving the result to memory

Technical data

a) Measurement category acc. to EN IEC 61010-2-030
- With limiter on measuring end ..... CAT III 300 V
- Without limiter on measuring end ..... CAT II 600 V

b) Type of insulation ..... double
c) Measuring end ..... pin-type
d) Plug
- Plug 1a (yellow core) ..... banana, 4 mm, safe, straight, nickel plated
- Plug 1b (blue core) ..... banana, 4 mm, safe, straight, nickel plated
- Plug 2 ..... multi-plug

e) Long-lasting load ..... 10 A
f) Maximum voltage ..... 600 V AC / DC
g) The product meets the requirements of ..... EN IEC 61010-031

2.1.5 WS-10-type adapters

Index	Name	Features
WAADAWS10	WS-10	-

Additional warnings

- The adapter must not be connected to live objects.

Technical data

a) Measuring end ..... Kelvin double-pin
b) Plug ..... PAT
c) Long-lasting load ..... 10 A
d) The product meets the requirements of ..... EN IEC 61010-031

2.1.6 WS-11-type adapters

Index	Name	Features
WAADAWS11	WS-11	**START** – button for triggering the measurement **ENTER** – button for saving the result to memory

Technical data

a) Measurement category acc. to EN IEC 61010-2-030
- With limiter on measuring end ..... CAT IV 600 V / CAT III 1000 V
- Without limiter on measuring end ..... CAT II 1000 V

b) Type of insulation ..... double
c) Measuring end ..... pin-type
d) Plug
- Plug 1a (blue core) ..... banana, 4 mm, safe, straight, nickel plated
- Plug 1b (red core) ..... banana, 4 mm, safe, straight, nickel plated
- Plug 2 ..... multi-plug

e) Long-lasting load ..... 1 A
f) Maximum voltage ..... 600 V AC / 1000 V DC
g) The product meets the requirements of ..... EN IEC 61010-031

2.2 Single-core leads – single

2.2.1 Leads 50 V on a reel or H-frame

Index	Length	Color	Features
WAPRZ015BUBBN	15 m	Blue	On a H-frame
WAPRZ015REBBN	15 m	Red	On a H-frame
WAPRZ015BUBBSZ	15 m	Blue	On a reel
WAPRZ015REBBSZ	15 m	Red	On a reel
WAPRZ025BUBBSZ	25 m	Blue	On a reel
WAPRZ025YEBBSZ	25 m	Yellow	On a reel
WAPRZ025GRBBSZ	25 m	Green	On a reel
WAPRZ025REBBSZ	25 m	Red	On a reel
WAPRZ030REBBN	30 m	Red	On a H-frame
WAPRZ030REBBSZ	30 m	Red	On a reel
WAPRZ030YEBBSZ	30 m	Yellow	On a reel
WAPRZ030YEBBN	30 m	Yellow	On a H-frame
WAPRZ040REBBSZ	40 m	Red	On a reel
WAPRZ040YEBBSZ	40 m	Yellow	On a reel
WAPRZ050REBBSZ	50 m	Red	On a reel
WAPRZ050YEBBSZ	50 m	Yellow	On a reel
WAPRZ060YEBBSZ	60 m	Yellow	On a reel
WAPRZ075BUBBSZ	75 m	Blue	On a reel
WAPRZ075REBBSZ	75 m	Red	On a reel
WAPRZ075YEBBSZ	75 m	Yellow	On a reel
WAPRZ080YEBBSZ	80 m	Yellow	On a reel
WAPRZ100BUBBSZ	100 m	Blue	On a reel
WAPRZ100REBBSZ	100 m	Red	On a reel
WAPRZ100YEBBSZ	100 m	Yellow	On a reel
WAPRZ200BUBBSZ	200 m	Blue	On a reel
WAPRZ200REBBSZ	200 m	Red	On a reel
WAPRZ200YEBBSZ	200 m	Yellow	On a reel

Technical data

a) Type of insulation ..... single
b) Plug 1..... banana, 4 mm, safe, straight, nickel plated
c) Plug 2..... banana, 4 mm, straight, nickel plated
d) Insulation material ..... polyurethane
e) Cross section ..... 0.75 mm^2
f) Maximum voltage ..... 50 V DC
g) The product meets the requirements of ..... EN IEC 61010-031

2.2.2 Leads <1 kV on a reel – shielded

Index	Length	Color	Features
WAPRZ050YEBBSZE	50 m	Yellow	On a reel, shielded
WAPRZ075YEBBSZE	75 m	Yellow	On a reel, shielded
WAPRZ100YEBBSZE	100 m	Yellow	On a reel, shielded
WAPRZ200YEBBSZE	200 m	Yellow	On a reel, shielded

Technical data

a) Type of insulation ..... double
b) Plug 1 ..... banana, 4 mm, straight, nickel plated
c) Plug 2a ..... banana, 4 mm, safe, straight, nickel plated
d) Plug 2b ..... banana, 4 mm, safe, pass-through, nickel plated
e) Insulation material ..... fluoropolymer
f) Cross section (conducting core) ..... 0.6 mm^2
g) Maximum voltage ..... 600 V AC / 850 V DC
h) The product meets the requirements of ..... EN IEC 61010-031

2.2.3 Leads 1 kV 1 mm²

Index	Length	Color	Features
WAPRZ0X7BLBB	0.7 m	Black	-
WAPRZ1X2BLBB	1.2 m	Black	-
WAPRZ1X2BLBBE	1.2 m	Black	Shielded
WAPRZ1X2BLBBN	1.2 m	Black	N marker
WAPRZ1X2BUBB	1.2 m	Blue	-
WAPRZ1X2REBB	1.2 m	Red	-
WAPRZ1X2YEBB	1.2 m	Yellow	-
WAPRZ2X2BLBB	2.2 m	Black	-
WAPRZ2X2BLBBL1	2.2 m	Black	L1 marker
WAPRZ2X2BLBBL2	2.2 m	Black	L2 marker
WAPRZ2X2BLBBL3	2.2 m	Black	L3 marker
WAPRZ2X2BUBB	2.2 m	Blue	-
WAPRZ2X2GRYEBB	2.2 m	Yellow-green	-
WAPRZ2X2REBB	2.2 m	Red	-
WAPRZ2X2YEBB	2.2 m	Yellow	-
WAPRZ004BLBB	4 m	Black	-
WAPRZ004BUBB	4 m	Blue	-
WAPRZ005BLBBE	5 m	Black	Shielded
WAPRZ005BUBB	5 m	Blue	-
WAPRZ005REBB	5 m	Red	-
WAPRZ005YEBB	5 m	Yellow	-
WAPRZ010REBB	10 m	Red	-
WAPRZ010YEBB	10 m	Yellow	-
WAPRZ020REBB	20 m	Red	-
WAPRZ020REBBSZ	20 m	Red	On a reel
WAPRZ020YEBB	20 m	Yellow	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... silicon
e) Cross section ..... 1 mm²
f) Long-lasting load ..... 16 A
g) Maximum load at 20 ms ..... 50 A
h) Maximum voltage ..... 1000 V AC / DC
i) The product meets the requirements of ..... EN IEC 61010-031

2.2.4 Leads 1 kV 1 mm² with marker U1 or U2

Index	Length	Color	Features
WAPRZ003BUBBU1	3 m	Blue	U1 marker
WAPRZ003BUBBU2	3 m	Blue	U2 marker
WAPRZ006BUBBU1	6 m	Blue	U1 marker
WAPRZ006BUBBU2	6 m	Blue	U2 marker
WAPRZ010BUBBU1	10 m	Blue	U1 marker
WAPRZ010BUBBU2	10 m	Blue	U2 marker
WAPRZ015BUBBU1	15 m	Blue	U1 marker
WAPRZ015BUBBU2	15 m	Blue	U2 marker

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... silicon
e) Cross section ..... 1 mm²
f) Long-lasting load ..... 16 A
g) Maximum load at 20 ms ..... 50 A
h) Maximum voltage ..... 1000 V AC / DC
i) The product meets the requirements of ..... EN IEC 61010-031

2.2.5 Leads 1 kV 1 mm² with fuse

Index	Length	Color	Features
WAPRZ002BLBBF10	2 m	Black	Fuse 10 A
WAPRZ002BUBBF10	2 m	Blue	Fuse 10 A
WAPRZ002GRBBF10	2 m	Green	Fuse 10 A
WAPRZ002REBBF10	2 m	Red	Fuse 10 A
WAPRZ002YEBBF10	2 m	Yellow	Fuse 10 A

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... polyamide
e) Cross section ..... 1 mm²
f) Long-lasting load ..... 10 A
g) Maximum voltage ..... 1000 V AC / DC
h) The product meets the requirements of ..... EN IEC 61010-031

Fuse data

a) Charakterystyka ..... FF (superfast)
b) Rated current ..... 10 A
c) Rated voltage ..... 600 V AC
d) Dimensions ..... 6.3 x 32 mm

2.2.6 Leads 1 kV 2.5 mm²

Index	Length	Color	Features
WAPRZ1X2BLBB2X5	1.2 m	Black	-
WAPRZ1X2REBB2X5	1.2 m	Red	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section ..... 2.5 mm²
f) Long-lasting load ..... 36 A
g) Maximum voltage ..... 1000 V AC / DC
h) The product meets the requirements of ..... EN IEC 61010-031

2.2.7 Leads 5 kV

Index	Length	Color	Features
WAPRZ1X8BLBB	1.8 m	Black	-
WAPRZ1X8BUBB	1.8 m	Blue	-
WAPRZ1X8REBB	1.8 m	Red	-
WAPRZ003BLBB5K	3 m	Black	-
WAPRZ003BUBB5K	3 m	Blue	-
WAPRZ003REBB5K	3 m	Red	-
WAPRZ005BLBBE5K	5 m	Black	-
WAPRZ010BLBBE5K	10 m	Black	-
WAPRZ010BUBB5K	10 m	Blue	-
WAPRZ010REBB5K	10 m	Red	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT IV 1000 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... silicon
e) Cross section ..... 1 mm²
f) Long-lasting load ..... 16 A
g) Maximum load at 20 ms ..... 50 A
h) Maximum voltage ..... 5500 V DC
i) The product meets the requirements of ..... EN IEC 61010-031

2.2.8 Leads 11 kV

Index	Length	Color	Features
WAPRZ1X8BLBBE10K	1.8 m	Black	Shielded
WAPRZ1X8BUBB10K	1.8 m	Blue	-
WAPRZ1X8REBB10K	1.8 m	Red	-
WAPRZ003BLBBE10K	3 m	Black	Shielded
WAPRZ003BUBB10K	3 m	Blue	-
WAPRZ003REBB10K	3 m	Red	-
WAPRZ005BLBBE10K	5 m	Black	Shielded
WAPRZ005BUBB10K	5 m	Blue	-
WAPRZ005REBB10K	5 m	Red	-
WAPRZ010BLBBE10K	10 m	Black	Shielded
WAPRZ010BUBB10K	10 m	Blue	-
WAPRZ010REBB10K	10 m	Red	-
WAPRZ015BLBBE10K	15 m	Black	Shielded
WAPRZ015BUBB10K	15 m	Blue	-
WAPRZ015REBB10K	15 m	Red	-
WAPRZ020BLBBE10K	20 m	Black	Shielded
WAPRZ020BUBB10K	20 m	Blue	-
WAPRZ020REBB10K	20 m	Red	-
WAPRZ55BLBBE10K	55 m	Black	Shielded
WAPRZ55BUBB10K	55 m	Blue	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT IV 1000 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... silicon
e) Cross section ..... 1 mm^2
f) Long-lasting load ..... 16 A
g) Maximum load at 20 ms ..... 50 A
h) Maximum voltage ..... 11000 V DC
i) The product meets the requirements of ..... EN IEC 61010-031

2.2.9 Leads 15 kV

Index	Length	Color	Features
WAPRZ1X8BLKROE15KV	1,8 m	Black	Shielded
WAPRZ1X8BUKRO15KV	1,8 m	Blue	-
WAPRZ1X8REKRO15KV	1,8 m	Red	-
WAPRZ003BLKROE15KV	3 m	Black	Shielded
WAPRZ003BUKRO15KV	3 m	Blue	-
WAPRZ003REKRO15KV	3 m	Red	-
WAPRZ005BLKROE15KV	5 m	Black	Shielded
WAPRZ005BUKRO15KV	5 m	Blue	-
WAPRZ005REKRO15KV	5 m	Red	-
WAPRZ010BLKROE15KV	10 m	Black	Shielded
WAPRZ010BUKRO15KV	10 m	Blue	-
WAPRZ010REKRO15KV	10 m	Red	-
WAPRZ020BLKROE15KV	20 m	Black	Shielded
WAPRZ020BUKRO15KV	20 m	Blue	-
WAPRZ020REKRO15KV	20 m	Red	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT IV 1000 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Spread range ..... 44 mm
e) Insulation material ..... silicon
f) Cross section ..... 1 mm^2
g) Long-lasting load ..... 10 A
h) Maximum load at 20 ms ..... 50 A
i) Maximum voltage ..... 17000 V DC
j) The product meets the requirements of ..... EN IEC 61010-031

2.3 Single-core leads – lead pairs

2.3.1 Single-core leads, CMP type

Index	Length	Color	Features
WAPRZCMP1	1 m	Black, red	Pair of leads
WAPRZCMP2	1.2 m	Black, red	Pair of leads

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section ..... 1 mm^2
f) Long-lasting load ..... 10 A
g) Maximum voltage ..... 2000 V AC / DC
h) The product meets the requirements of ..... EN IEC 61010-031

2.3.2 Single-core leads, CMM type

Index	Length	Color	Features
WAPRZCMM1	0.9 m	Black, red	Pair of leads

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section ..... 0.65 mm^2
f) Long-lasting load ..... 10 A
g) Maximum voltage ..... 1000 V AC / 1200 V DC
h) The product meets the requirements of ..... EN IEC 61010-031

Index	Length	Color	Features
WAPRZCMM2	0.8 m	Black, red	Pair of leads

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section ..... 1 mm^2
f) Long-lasting load ..... 10 A
g) Maximum voltage ..... 2000 V AC / DC
h) The product meets the requirements of ..... EN IEC 61010-031

2.3.3 Single-core leads, CMX type

Index	Length	Color	Features
WAPRZCMX1	1 m	Black, red	Pair of leads

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section ..... 1.2 mm^2
f) Long-lasting load ..... 16 A
g) Maximum voltage ..... 2000 V AC / DC
h) The product meets the requirements of ..... EN IEC 61010-031

2.4 Two-core leads

2.4.1 Two-core cables without markers (for TDR instruments)

Index	Length	Color 1	Color 2	Features
WAPRZ0X6DZBB	0.6 m	Black	Red	-

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section ..... 0.75 mm^2
f) Long-lasting load ..... 10 A
g) Maximum voltage ..... 1000 V
h) The product meets the requirements of ..... EN IEC 61010-031

2.4.2 Two-core cables without markers, with G connection (for MIC instruments)

Index	Length	Color 1	Color 2	Features
WAPRZ1X2BLBBE	1.2 m	Black	Blue	Shielded
WAPRZ005BLBBE	5 m	Black	Blue	Shielded

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... polyamide
e) Cross section ..... 1 mm^2
f) Long-lasting load ..... 16 A
g) Maximum load at 20 ms ..... 50 A
h) Maximum voltage ..... 50 V
i) The product meets the requirements of ..... EN IEC 61010-031

2.4.3 Two-core leads without markers, type BDP (for MMR-650 instrument)

Index	Length	Color 1	Color 2	Braid color	Features
WAADAPRZ025BDP	25 m	Blue	Red	Orange	On a reel without wheels
WAADAPRZ050BDP	50 m	Blue	Red	Orange	On a reel with wheels
WAADAPRZ075BDP	75 m	Blue	Red	Orange	On a reel with wheels
WAADAPRZ100BDP	100 m	Blue	Red	Orange	On a reel with wheels

Additional warnings

- Product intended only for use with MMR-650. Do not use with other devices.
- Leads must not be connected to electrical mains circuits.

Operation

- All measurements must be performed in accordance with the recommendations of the manufacturer of the tested system, without exceeding the limits defined for the system.
- Before taking measurements on a tall structure, the electrostatic charge must be discharged from it to the ground using a separate grounding conductor connected to the lightning protection system at the bottom of the structure.
- If measurements are performed on a high object, it is necessary to take into account the risks resulting from carrying heavy equipment to a high altitude. Every effort should be made to protect people working below and at height when:
  - mounting the measuring circuit,
  - performing measurements,
  - dismantling circuits,

  especially in strong winds, during snowfall or rain, and in other difficult weather conditions.

Technical data

a) Type of insulation ..... single
b) Plug
   - Plug 1a (blue core) ..... banana, 4 mm, safe, straight, nickel plated
   - Plug 1b (red core) ..... banana, 6 mm, safe, straight, nickel plated
   - Plug 2 ..... PAT
c) Insulation material ..... PVC
d) Cross section
   - Blue core ..... 0.75 mm^2
   - Red core ..... 6 mm^2
e) Long-lasting load ..... 12 A
f) Maximum voltage ..... 20 V
g) Resistance – blue core
   - 25 m ..... 0.77 Ω
   - 50 m ..... 1.55 Ω
   - 75 m ..... 2.05 Ω
   - 100 m ..... 2.44 Ω
h) Resistance – red core
   - 25 m ..... 0.20 Ω
   - 50 m ..... 0.23 Ω
   - 75 m ..... 0.32 Ω
   - 100 m ..... 0.40 Ω
i) The product meets the requirements of ..... EN IEC 61010-031

2.4.4 Two-core leads with marker U1 / I1 or U2 / I2 (for MMR and MZC instruments)

Index	Length	Color 1	Color 2	Features
WAPRZ003DZBBU1I1	3 m	Blue	Red	U1 and I1 marker
WAPRZ003DZBBU2I2	3 m	Blue	Red	U2 and I2 marker
WAPRZ006DZBBU1I1	6 m	Blue	Red	U1 and I1 marker
WAPRZ006DZBBU2I2	6 m	Blue	Red	U2 and I2 marker
WAPRZ010DZBBU1I1	10 m	Blue	Red	U1 and I1 marker
WAPRZ010DZBBU2I2	10 m	Blue	Red	U2 and I2 marker
WAPRZ015DZBBU1I1	15 m	Blue	Red	U1 and I1 marker
WAPRZ015DZBBU2I2	15 m	Blue	Red	U2 and I2 marker

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section
- Blue core ..... 0.75 mm^2
- Red core ..... 2.5 mm^2

f) Long-lasting load
- Blue core ..... 12 A
- Red core ..... 32 A

g) Maximum load at 30 ms ..... 350 A
h) Maximum voltage ..... 1000 V
i) The product meets the requirements of ..... EN IEC 61010-031

2.4.5 Two-core leads with marker U1 / I1 or U2 / I2 (for MZC-340-PV instrument)

Index	Length	Color 1	Color 2	Features
WAPRZ003DZBBU1I1CATIV	3 m	Blue	Red	U1 and I1 marker
WAPRZ003DZBBU2I2CATIV	3 m	Blue	Red	U2 and I2 marker

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT IV 1000 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... PVC
e) Cross section
- Blue core ..... 0.75 mm^2
- Red core ..... 2.5 mm^2

f) Long-lasting load
- Blue core ..... 12 A
- Red core ..... 32 A

g) Maximum load at 30 ms ..... 350 A
h) Maximum voltage ..... 1000 V
i) The product meets the requirements of ..... EN IEC 61010-031

2.4.6 Two-core leads with marker U1 / I1 or U2 / I2 (for PAT instruments)

Index	Length	Color 1	Color 2	Features
WAPRZ1X2DZBB1	1.2 m	Blue	Red	U1 and I1 marker
WAPRZ1X2DZBB2	1.2 m	Blue	Red	U2 and I2 marker

Technical data

a) Measurement category acc. to EN IEC 61010-2-030 ..... CAT III 1000 V / CAT IV 600 V
b) Type of insulation ..... double
c) Plug ..... banana, 4 mm, safe, straight, nickel plated
d) Insulation material ..... silicon
e) Cross section
   - Blue core ..... 2.5 mm^2
   - Red core ..... 2.5 mm^2
f) Long-lasting load
   - Blue core ..... 10 A
   - Red core ..... 25 A
g) Maximum load at 20 ms ..... 50 A
h) Maximum voltage ..... 50 V
i) The product meets the requirements of ..... EN IEC 61010-031